



## SQL Basics for Data Science

### Project Deliverable

- Your deliverable will be a Notebook with your Solution.

### Instructions

You are a Data Science Consultant working on a project to understand car crashes in the city of Chicago. As part of your descriptive analysis report, you decide to find answers to the following questions. Use the SQL language to work on solutions.

1. Display a list of 5 makes that had the highest number of crashes?
2. Most personal vehicles involved in crashes were travelling towards which direction?
3. How many passengers were involved in personal cars were in accidents?
4. How many passengers were involved in accidents while travelling in personal Sport Utility vehicles?
5. Compute the total number of Mercedes-Benz vehicles involved in accidents while being parked.
6. Compute the total occupant count per vehicle count.
7. Sort the number of passengers in descending order by travel direction taking into account travel direction. Return travel direction and no. of passengers.
8. Select top 5 vehicle models involved in the accident with no defect, order them by make and show their manoeuvre.
9. Which ridesharing vehicles in an accident had the most number of passengers? Return model, and number of passengers.

Before performing any analysis, you select only vehicles manufactured in the last 15 years. Using the following credentials, log into the MySQL database accessed via the following URL and credentials.

**URL** = <http://157.245.102.81/phpmyadmin/>

**username** = learner

**password** = E\*3b8km\$dpmRLLuf1Rs\$

In PhpMyAdmin, go into the SQL tab and enter your SQL query in there. Hit go, then click Export at the bottom of your results. You can select to export as a CSV.

You can use the following instructions to retrieve your dataset from the MYSQL Database:

- Log in to phpMyAdmin.
- On the left side select the traffic\_accidents\_database.
- Select the traffic\_accidents table.
- On the top navigation bar select the SQL tab.
- Put the SQL select command that selects items the appropriate crash date.
- Click the Go button on the bottom corner.
- On the results page, scroll down and under query results operations click export.
- In the new page, select custom - display all possible options option, then select format = CSV.
- Scroll down to the Format-Specific options the select "Put column names in the first row".
- Click Go and the file should Download.
- Open your working collaboratory file and on the left side click on the file's icon and upload the downloaded file.
- In your code to import the file, just use the name of the file as a reference i.e.  
`pd.read_csv('example.csv').`